

## BACK CARE

The cause of most back problems is poor posture, loss of flexibility, stressful living/working habits and above all, a general decline in physical fitness. When you "let yourself go," (and most of us do with age) the *first* thing to *go* can be back strength. Along with correct lifting techniques, we should also work on our overall physical condition. People who do not stay in good physical and mental condition are at high risk for back problems.

### Nutrition

Nutrition is an important key to staying physically fit! As we grow older, our metabolism slows down. To counteract this natural event, we have to eat the right types of food-and not too much of it-or the pounds come on quickly! Now, what does nutrition have to do with a healthy back? For one thing, a healthy back is correctly balanced on your spine. With a "sway" back, that balance is lost-and those darned potbellies cause sway backs. Carrying around excess weight puts tremendous strain on back tissues, so lifting even a small extra load may cause an injury.

### Exercise

Exercise plays an important role as well. A form of exercise as simple as walking 30 minutes a day can raise your heart rate and burn enough calories to help keep you lean. Flexibility is another condition that changes as we grow older, if we don't work to retain it. It's true, as they say-"Use it or Lose it!" Without flexibility, we lose our body's full range of motion. Then, when a sudden, physical demand takes a muscle or joint further than it's used to, the risk of injury is high. You can do stretching exercises every morning to keep yourself flexible and ready for the physical demands of work. After all, don't athletes warm up before a game to prevent injury?

### Fixed Positions

Fixed positions--not moving *enough*--can also cause back problems. Staying in a fixed position for too long can lead to muscle spasms. We feel it as stiffness, but by the time discomfort from "static" muscle contractions is experienced, low level tissue damage has begun. Take stretch breaks between long standing or sitting periods to improve circulation and prevent back strain.

Poor body mechanics and bad lifting habits usually "trigger" a back injury-and are more likely to do so if overall physical condition is poor. Remember these techniques to help escape injury:

- Avoid using fast, jerking motions when lifting.
- Avoid bending and twisting at the same time.
- Avoid handling a load too far away! Keep the load close to your body.
- Teamwork! If the load is too heavy, two persons should carry the load.

Emotional Stress leads to mental distraction, so that things other than proper body mechanics are on your mind. Stress and back pain seem to go together. Low back pain has been called "a tension headache that slipped." Solving our personal problems isn't always easy to do, but it often takes away back pain and helps prevent repeated injuries.

## BACK INJURY PREVENTION TIPS

Most people have probably heard that in order to lift safely, you must lift properly. You're told to "bend your knees not your back," and "don't twist as you lift." This is good advice but sometimes seems to go against human nature. Yet, there *are* actions you can take to help you lift properly.

**1. Get as close to the load as possible.** The further the load is from the centerline of your body, the greater the strain imposed on your back. If need be, squat down to lift the load and pull it between your legs. This gets it closer to the center of your body and helps prevent the need to bend at the waist. However, since your leg muscles are the largest muscles in your body, they are the biggest energy consumers. Repeated squatting can be very fatiguing, and reduces a person's ability to lift in this manner for any length of time. In addition to lifting the load, you are also hoisting the majority of your body weight. For *repeated* lifting, other strategies must be used.

**2. Avoid picking up heavy objects placed below your knees.** Try to see that heavy objects are placed and stored above knee level and below shoulder level. If you suspect the load is too heavy to be lifted comfortably, do not chance it. Use a mechanical aid, break the load down into its component parts, or get help. The most common cause of back injury is overloading.

**3. Keep your back straight.** This means don't bend at the waist when reaching to lift an object. Keep the natural arch in your lower back, which distributes the load evenly over the surface of spinal disks, and is less stressful than if the disk is pinched between vertebrae. Bending principally from the hips is acceptable if you maintain the arch in your back, rather than bending at the waist.

**4. Glue your hand to your thigh.** If you carry a load in one hand, such as when carrying a toolbox, place your free hand on the outside of your thigh and mentally "glue" it into position. This will help you maintain correct back alignment rather than lifting and tilting to one side. When carrying a heavy load, side bending can be just as stressful to the spine as bending forward.

**5. Tighten your stomach muscles.** This technique helps prevent your spine from twisting. If you lift a load and need to place it off to one side, turn by moving your feet. After repeated lifts you might find yourself getting a bit sloppy and forgetting to move your feet. You can overcome this tendency if the place you set the load down is at least one step away from where it is lifted. If you wear a back support belt, wear it low on your trunk and loosen it when you are not lifting.

**6. Stay in good physical condition.** A protruding stomach is an extra load carried away from the centerline of the body, and prevents you from keeping a lifted object close-the number one rule for back care. When you bend at the waist to lift, due to the leverage principal, the load is up to 10 times heavier than its actual weight. A "pot belly" puts extra, stressful weight on the spine.

**7. Stretch and loosen up before work.** Research has shown that trunk flexibility and mobility is significantly lower in the morning than later in the day, increasing the number and severity of back strains at this time. A few minutes of stretching can warm up cold stiff muscles and tendons and help you avoid an injury. All professional athletes know this-"industrial athletes" should too!

# **Back Safety**

## ***Safety Training Handout***

### ■ **What leads to back injuries?**

- Lifting excessive weight
- Using poor lifting technique such as bending over at waist or twisting with loads
- Reaching overhead for elevated loads
- Carrying awkwardly-shaped objects
- Sitting or standing too long in one position for extended periods of time
- Working in awkward positions for extended periods of time
- *Contributing factors:* poor physical condition, extra weight, and poor posture

### ■ **What are the most common types of back injuries?**

- Muscle & ligament strains & sprains
- Muscle spasms
- Herniated, ruptured or slipped discs
- Degenerative discs

### ■ **How can back injuries be prevented?**

- Avoid lifting and bending where possible
- Use carts and dollies where possible
- Ask for help with heavy loads
- Always use proper lifting techniques
- Stretch before lifting
- Avoid prolonged sitting or standing for extended periods of time
- Avoid lifting loads above shoulders where possible
- Slow down during heavy, repetitive lifting and take rest breaks
- Sleep on a firm mattress, get in shape, and use good posture

### ■ **What's the proper way to lift?**

- Test the load's weight
- Place feet shoulder-width apart and close to object
- Bend the knees
- Get a secure grip
- Lift with the legs, keeping back straight
- Lift evenly and slowly with the load kept close to your body
- Avoid twisting torso while carrying load; to change directions, use feet

### ■ **What if I have back pain?**

- Rest your back and avoid heavy lifting
- For pain relief:
  - Apply cold for 1<sup>st</sup> 48 hours
  - Apply Heat after 48 hours
  - Use over-the-counter pain relievers
- Gradually begin gentle stretching
- Consult physician if:
  - Pain persists after resting 72 hours
  - You have a feeling of numbness in your lower limbs